



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/931,225	08/16/2001	Jarir K. Chaar	YOR920010359US1	2853

7590 12/03/2004

Casey August  
Intellectual Property Law Dept.  
IBM Corporation  
P.O. Box 218  
Yorktown Heights, NY 10598

EXAMINER

NGUYEN, TRONG NHAN P

ART UNIT PAPER NUMBER

2152

DATE MAILED: 12/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/931,225

**Applicant(s)**

CHAAR ET AL.

**Examiner**

Jack P Nguyen

**Art Unit**

2152

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 5 is/are rejected.
- 7) ☒ Claim(s) 2-4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

Claims 1-5 are being examined.

### ***Specification***

The abstract of the disclosure is objected to because in line 5, the words "... that that" are repeated. Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim states, "...where the values of T.sub.ho..." It is indefinite because T.sub.ho can be of any value; hence, it renders the claim indefinite.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watson et al, 6,775,704 (Watson hereafter).**

As per claim 1, Watson teaches a method of regulating TCP/IP connection requests (74, fig. 5, col. 6, line 34) which await service in a system by a TCP/IP connection control table (72, fig. 5; col. 7, lines 58-66; *authentication system regulates and validates TCP/IP traffic and connection requests between the client and server*) to prevent overload thereof, said method comprising the steps of: a) monitoring usage of said system on a dynamic basis (abstract, col. 2, lines 56-59 and 62-67; system monitors and regulates requests traffic between client and server for authentication purposes), b) dynamically computing a time-out value  $T_{sub,ho}$  which defines the time duration that a TCP connection request may await service by said system (95, fig. 6, col. 7, lines 29-31; *authentication system dynamically generates tokens (associated with each request) with desired expiration times to prevent denial of service (DoS) attacks*), and c) removing from said TCP/IP connection control table all TCP/IP connection requests which have been awaiting service in said TCP/IP stack for a duration exceeding  $T_{sub,ho}$  (155, 158, fig. 10, col. 8, lines 64-66; *the response and token packets are being validated by the authentication system (see fig. 7). If the token packet exceeds its expiration time (timeout value), the response packet (associated with the request) will be dropped or removed from system (table)*). Watson does not specifically disclose based upon usage, dynamically computing a time-out value  $T_{sub,ho}$ . However, it would have been obvious to one of ordinary skill in the art to be motivated to introduce a variation of the Watson teachings by dynamically recomputing a time out value based upon usage to thwart or prevent system from overload or DoS attacks when system usage surges beyond normal expected rate.

As per claim 2, in conjunction with claim 1, Watson teaches timeout values (T.sub.ho.) can be dynamically set as desired (col. 7, lines 29-32). Watson does not specifically disclose TCP/IP connection control table has size N.sub.size and an upper bound for usable table size of  $N.sub.abs \leq N.sub.size$ , and where values of T.sub.ho are dynamically computed in a range [T.sub.min, T.sub.max]. However, it would have been obvious to one of ordinary skill in the art to be motivated to include ranges for connection table and time out values to control connection requests in order to prevent the system from overloading or DoS attacks.

**Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watson et al, 6,775,704 (Watson hereafter) in view of Applicant Admitted Prior Art (Applicant hereafter).**

As per claim 5, Watson does not specifically disclose T.sub.min has a value in a range of 0.01 to 1.0 secs. and T.sub.max has a value in a range of 60 to 120 secs. However, Applicant discloses half-open TCP connection time is usually less than a second or so while a typical timeout value associated with SYN flood is anywhere between 60 to 120 seconds (page 1, paragraph 0005). Hence, it would have been obvious to one of ordinary skill in the art to set these ranges for normal and maximum connection times to regulate TCP/IP connections.

***Allowable Subject Matter***

Art Unit: 2152

Claims 3-4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Packer, 5,802,106; Ricciulli, 6,816,910; Galand et al, 6,424,624 ; Bernhard et al, 6,609,205 ; Ogishi et al, 6,178,450 ; Schuba et al, 6,725,378 ; Srinivas, 6,823,387 ; Chen et al, US Pub 2002/0103916

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jack P Nguyen whose telephone number is (571) 272-3945. The examiner can normally be reached on M-F 8:30-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (571) 272-3949. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2152

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jpn



FRANTZ B. JEAN  
PRIMARY EXAMINER